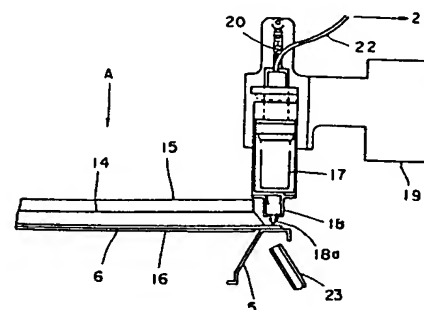


(54) MANUFACTURE OF COLOR CATHODE RAY TUBE SHADOW MASK STRUCTURE BODY

(11) 4-92333 (A) (43) 25.3.1992 (19) JP
 (21) Appl. No. 2-206892 (22) 6.8.1990
 (71) HITACHI LTD (72) HIDEO TANABE(3)
 (51) Int. Cl.⁵ H01J9/14

PURPOSE: To make it possible to impress a uniform tensile force upon a shadow mask after it is fixed to a mask frame by using a magnetic force for maintaining the shadow mask until it is fixed to the frame.

CONSTITUTION: A shadow mask 6 is adsorbed on a flat surface of a heater 14, and while heating the shadow mask 6 by means of a thermal conduction between adhered flat surfaces, both the heater 14 and a magnet chuck 15 are loaded on a frame 5 by means of an alignment. A condenser lens 17 is arranged so that a laser beam can irradiate approximately the center of the peripheral part of the shadow mask 6 protruding outside from the heater 14, and a movable part 18 formed as one united body with this lens 17 is supported with a robot 19 so that a full arc of the shadow mask 6 can be welded. In this way, by carrying out a spot welding on the full arc of the shadow mask 6 at many points by means of a laser, it is possible to obtain a shadow mask structure body capable of creating a uniform tensile force at a room temperature.

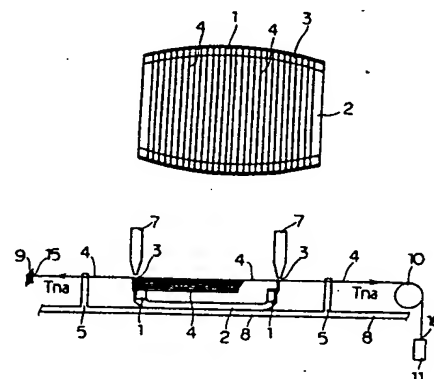


(54) METHOD OF ATTACHING GRID TO FRAME OF COLOR CATHODE RAY TUBE

(11) 4-92334 (A) (43) 25.3.1992 (19) JP
 (21) Appl. No. 2-208077 (22) 8.8.1990
 (71) SUMITOMO METAL MINING CO LTD (72) MINORU TAWARA
 (51) Int. Cl.⁵ H01J9/14, H01J29/02, H01J29/07

PURPOSE: To cut off wire rods left over outside a frame and fix wire-rod grids to the frame under a certain tension by individually the wire-rod grids.

CONSTITUTION: Wire-rod grids 4 composed of wire-rod grids to be independent to each other are prepared, arranged on the frame of a color cathode ray tube at a predetermined pitch, maintained at the predetermined pitch by gutter type array plates 5 disposed on both sides of the frame and fixed to the frame under a predetermined independent tensile force applied to the respective wire-rod grids 4, and the wire-rod grids left over outside the frame are cut off. According to the present invention, since a tensile force can be applied individually to the wire-rod grids one by one, an arbitrary tensile force is applied at an arbitrary position of each wire-rod grid in the main beam of the frame, so that the appropriate wire stretch may be performed for every wire-rod grid.



(54) METHOD OF ATTACHING GRID TO FRAME OF COLOR CATHODE RAY TUBE

(11) 4-92335 (A) (43) 25.3.1992 (19) JP
 (21) Appl. No. 2-208078 (22) 8.8.1990
 (71) SUMITOMO METAL MINING CO LTD (72) MINORU TAWARA
 (51) Int. Cl.⁵ H01J9/14, H01J29/02, H01J29/07

PURPOSE: To independently maintain a predetermined tensile force acting on each wire-rod grid and tension due to reaction force of a frame when a force applied to the frame is released, by fixing both sides of each wire rod to the frame in the state of a certain deformation being applied to the frame.

CONSTITUTION: Wire-rod grids 4 composed of mutually independent wire rods are prepared, arranged on the frame of a color cathode ray tube at a predetermined pitch and maintained at the predetermined pitch by gutter type alignment plates 5 disposed on both sides of the frame, and a predetermined independent tensile force is applied to the respective wire-rod grids and a certain deformation is made inside the frame along the wire-rod grids by applying a force to the frame from the outside and both ends of the respective wire-rod grids are fixed to the frame in the state of a certain deformation being applied to the frame and then a force applied to the frame is released. An arbitrary tensile force can be applied to the wire-rod grids at the arbitrary positions of the wire-rod grids in the main beam of the frame and at the same time the frame is bent, so that the appropriate wire stretch may be performed for every wire-rod grid.

